

**AUDIT
REPORT**

**LEWIS RESEARCH CENTER'S
HAZARDOUS WASTE MANIFEST PROCESS**

June 12, 1998



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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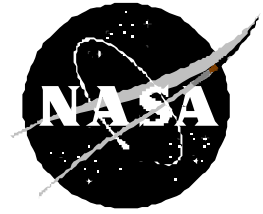
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ACRONYMS

| | |
|------|---|
| CFR | Code of Federal Regulations |
| DOT | Department of Transportation |
| EPA | Environmental Protection Agency |
| EMO | Environmental Management Office |
| LeRC | Lewis Research Center |
| NASA | National Aeronautics and Space Administration |
| OIG | Office of Inspector General |
| RCRA | Resource Conservation and Recovery Act |

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001



Reply to Attn of: **W**

June 12, 1998

TO: 0100/Director, Lewis Research Center

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of the Lewis Research Center's Hazardous
Waste Manifest Process, Assignment Number A-HA-97-004,
Report Number IG-98-014

The subject final report is provided for your use. Please refer to the executive summary for the overall audit results. Your comments on the draft report were responsive to our recommendations, and we will close the four recommendation in our tracking system. However, we expect the Lewis Research Center to track its corrective actions until they are fully implemented.

If you have questions concerning the report, please contact Mr. Chester Sipsock, Program Director, Environment and Safety Management, at (216) 433-8960. We appreciate the courtesies extended to the audit staff. See Appendix 5 for report distribution.

Russell A. Rau

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LeRC'S HAZARDOUS WASTE MANIFEST PROCESS

EXECUTIVE SUMMARY

INTRODUCTION

The purpose of this audit was to determine whether National Aeronautics and Space Administration (NASA) Lewis Research Center (LeRC) properly managed the hazardous waste leaving its facilities. Specifically, we assessed whether LeRC had controls in place to achieve compliance with hazardous waste regulations and whether the controls were adequate.

Environmental Protection Agency (EPA) and Department of Transportation regulations govern the disposal of hazardous waste due to its danger to human health and the environment. LeRC is responsible and liable for the hazardous waste until disposal; therefore, proper identification and physical control over LeRC-generated waste is important. The key document used to track the waste throughout the disposal process is the EPA hazardous waste manifest form, which the EPA requires the generator (LeRC) to certify.

RESULTS OF AUDIT

LeRC's hazardous waste manifest process was generally compliant with the environmental, transportation, and LeRC regulations and requirements tested.

However, internal control weaknesses existed in four areas essential to ensuring full regulatory compliance and minimizing LeRC's liability when disposing of hazardous waste. First, a 24-hour emergency response telephone number was not included or clearly visible on all hazardous waste manifest forms. Second, the hazardous waste manifest files maintained by the support service contractor did not contain documentation to support compliance with regulations, and the manifests were not accurate. Third, manifests were not being adequately controlled to ensure review and signature by authorized personnel. Lastly, required training by environmental office civil servant and contract staff was not

completed. Additionally, the Environmental Management Office's support service contractor was not always implementing a compliant hazardous waste management program as required by the contract.

This report contains recommendations that will help the Center ensure regulatory compliance and the effective management of the hazardous waste manifest process.

INTRODUCTION

The NASA Lewis Research Center (LeRC) is responsible for managing the hazardous waste that it generates. The Environmental Protection Agency (EPA) defines hazardous waste management as the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste. Tight controls over the hazardous waste manifest process are important because LeRC is responsible for hazardous waste from the time it leaves the Center to final disposal. Essential to any control system is the production and maintenance of complete and accurate documentation that clearly supports LeRC's management of its hazardous waste. Such documentation can minimize LeRC's risk for funding spills or future cleanup efforts as a potentially responsible party.

In 1976, the Resource Conservation and Recovery Act (RCRA) was passed to regulate hazardous waste. RCRA establishes standards for the generation, handling, transportation, storage, treatment, and disposal of hazardous waste. This process is commonly referred to as "cradle-to-grave" responsibility, meaning that the hazardous waste generator is responsible and liable for the hazardous waste from the point of generation until it is buried or destroyed. The EPA administers and enforces RCRA, and the Department of Transportation (DOT) enforces the transportation of hazardous materials. Both agencies implemented procedures in the Code of Federal Regulations (CFR) that are to be followed when handling hazardous waste. Specifically, the EPA requires that the transportation and disposal of all hazardous waste be accompanied by a hazardous waste manifest form (Appendix 1). The manifest form is the key document for tracking the waste in a hazardous waste management program.

In 1992, the Federal Facility Compliance Act amended RCRA to bring all Federal facilities into compliance with the applicable Federal and State hazardous waste laws. The amendment waives Federal immunity for violation of

hazardous waste requirements and allows fines and penalties to be imposed. As a hazardous waste generator, LeRC must comply with the Federal and State laws.¹

To ensure compliance with the numerous environmental regulations, NASA implemented Policy Directive 8800.16, “NASA Environmental Management.” The directive assigns administrative responsibility for environmental compliance to each Center’s line manager (the Center Director). At LeRC, the Center Director has delegated management of the environmental program to the Environmental Management Office (EMO) Chief. This environmental official is ultimately responsible for all environmental activities, including hazardous waste management, regulatory compliance, and support service contractor oversight.

To help fulfill its hazardous waste responsibilities, LeRC uses a support service contractor to develop and implement an effective and compliant hazardous waste management program. The contract requires complying with Federal, State, and NASA environmental-related laws and regulations; planning and implementing the program; and enhancing the EMO’s mission.

¹ The state of Ohio has incorporated the EPA and DOT requirements into the Ohio Administrative Code.

OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

Our objective was to determine whether NASA properly managed the hazardous waste leaving its facilities. Specifically, we wanted to answer:

1. Do NASA facilities and its contractors have controls in place that (a) ensure compliance with environmental statutes that govern off-site hazardous waste transportation, treatment, storage, and disposal; and (b) minimize NASA's risk for contaminated site cleanup?
2. Are those controls working?

The findings in this report pertain solely to work under objective 1(a) at LeRC. We discussed our findings with the EMO Chief in May 1997, and he has implemented corrective action. Because the LeRC findings were part of a broader ongoing review, our intent was to incorporate this work into a consolidated NASA-wide report after work was completed at all participating Centers. However, because the findings at other Centers differed in nature, we decided to issue this report separately.

SCOPE AND METHODOLOGY

We performed the following work to determine whether LeRC had internal controls in place to ensure compliance with regulations.

- ◆ Interviewed LeRC and contractor personnel to gain an understanding of the nature and extent of their involvement in hazardous waste management.
- ◆ Identified Federal, State, NASA, and LeRC hazardous waste regulations and policies related to hazardous waste generators and transporters.
- ◆ Reviewed LeRC and Headquarters environmental assessments and EPA notice of violations.
- ◆ Reviewed hazardous waste training regulations and LeRC training records.

- ◆ Reviewed the internal control process related to the disposal of hazardous waste.
- ◆ Judgmentally sampled 9 (6 percent) of the 149 hazardous waste manifests issued by LeRC in calendar year 1995. For the nine manifests, we tested compliance for various Federal, State, and local requirements. (See Appendix 2 for a detailed discussion of the sample and Appendix 3 for further explanation of the requirements tested.)

We did not perform additional sampling once noncompliance problems were found within the nine sampled manifests.

***INTERNAL CONTROLS
REVIEWED***

This audit was a compliance review; therefore, all the regulations and internal controls affiliated with the disposal of hazardous waste were reviewed (see Appendix 3.) The internal controls that we identified to be either inadequate or lacking are discussed in detail in the Findings and Recommendations section.

AUDIT FIELD WORK

Audit field work was performed from November 1996 through October 1997, in accordance with generally accepted government auditing standards.

FINDINGS AND RECOMMENDATIONS

RESULTS OF AUDIT

Based on the limited sampling performed (see Appendix 2), LeRC's hazardous waste manifest process was in compliance with the majority of environmental and transportation regulations. However, we found noncompliance in four areas; three relating to the hazardous waste manifest and one related to training. Specifically,

- ◆ manifests did not include a 24-hour emergency telephone number;
- ◆ documentation was lacking from the manifest files, and manifests were not accurate;
- ◆ manifests were not being adequately controlled to ensure review and signature by authorized personnel; and
- ◆ required training was not completed.

These conditions occurred because (1) LeRC did not adequately monitor its support service contractor, (2) LeRC and the contractor do not have a tracking system for controlling hazardous waste manifests and ensuring required training has been taken, and (3) the roles of responsible parties were not clear.

Without adequate internal controls, LeRC cannot ensure that its hazardous waste is properly disposed of. If problems or negligence occurs, LeRC can be held accountable and liable for all costs (including penalties and fines) associated with complete resolution of the problem.

NO EMERGENCY TELEPHONE NUMBER

LeRC must comply with regulations for manifest preparation; however, some hazardous waste manifests did not include the required 24-hour emergency telephone number. The emergency number was not included because EMO controls were not consistently implemented as required by Center policy. Therefore, LeRC has no assurance that all Federal and State regulations have been implemented.

Title 49 CFR Part 172.6 on transportation requirements states:

A person who offers a hazardous material for transportation must provide a 24-hour emergency response telephone number on the shipping paper (manifest) in a clear visible location.... The telephone number must be monitored at all times in case of an incident.

According to the contractor's hazardous waste operation manager (hereafter referred to as Manager), the contractor's policy is to include a 24-hour accessible telephone number on the manifest.

Of the nine manifests examined, the emergency response telephone number was often not in a clearly identifiable location. Environmental office staff (who work with manifests) had difficulty locating the emergency number when asked to verify them for us on the manifest. We found telephone numbers in various places, such as in the description section and in the margin. In case of a spill, the transporter or treatment facility needs an emergency number to call regarding the harmful effects and the proper handling and cleanup of the hazardous waste.

With the assistance of the Manager, we determined that:

- ◆ 3 manifests did not contain an emergency telephone number.
- ◆ 6 manifests included an emergency number. In three cases, the transporter prepared the manifest instead of the support service contractor, and the manifest clearly and accurately displayed an emergency number. For the other three, which had been prepared by the support service contractor, the contractor used LeRC's chemical storage facility telephone number, which is not reachable on a 24-hour basis. Consequently, a caller could be transferred into voice mail in an emergency situation.

The problems being experienced with the manifests could have been minimized or avoided if existing Center policy had been implemented. LeRC's 1994 Environmental Programs Manual requires that the EMO's Environmental Compliance Team

sign all manifests and that the support service contractor review all supporting documentation (which includes the manifests). The EMO Chief expects the Compliance Team to review the manifest for completeness and the support service contractor to operate a compliant, effective, and efficient hazardous waste management program, as tasked under the contract.

The civil servant and contractor staff had different perceptions on what constitutes a review. The EMO Compliance Team member responsible for signing the manifests was not performing an adequate review prior to signing them. This individual informed us that he was performing only a cursory review of the manifest, relying instead on the contractor to accurately and fully complete the form. The team member relied on the contractor because the contractor is the trained expert who (1) handles hazardous waste on a daily basis, (2) is familiar with the specifics of the regulations, and (3) is responsible for identifying the waste on the manifest. Additionally, the Manager was not reviewing all the manifest forms. The Manager informed us that he only spot checked some of the completed manifests prior to shipment. The Manager commented that the Compliance Team is responsible for reviewing the manifests. Without a full review, the Manager is not in a position to know whether his staff have adequately completed each form and whether they complied with the regulations.

Improved contractor oversight by the EMO Chief would facilitate future compliance. Prior to October 1996, the Chief only minimally monitored the support service contractor's activities through periodic discussions and team meetings. However in October 1996, the Chief began quarterly reviews and assessments of the contractor's hazardous waste management process. These reviews are a step toward monitoring the contractor; however, we did not assess their adequacy or effectiveness.

***LACK OF
DOCUMENTATION***

Federal and State regulations require the generator (LeRC) to ensure that the manifest is returned from a treatment, storage, or disposal facility within a specified time period. LeRC was noncompliant with these regulations because a formal process was not in place to record and track regulatory compliance. Consequently, a reviewing entity (such as the EPA, NASA Headquarters, LeRC, or the Office of Inspector General) cannot determine whether regulatory compliance has been achieved and whether the hazardous waste safely arrived at the designated facility.

Title 40 CFR Part 262 states:

A generator must contact the treatment, storage, or disposal facility if the original manifest is not returned within 35 days from the transportation date to determine the status of the hazardous waste and the manifest. By the 45th day, the generator must submit an Exception Report to the regional EPA if the manifest has not been returned.

According to the Manager, neither the contractor nor LeRC has formal guidance or standards regarding the processing of hazardous waste manifests. However, the contractor's current practice is to:

1. Place the manifest file folder on a desk after the shipment.
2. Periodically check the files and mentally calculate whether the manifest was returned within the required time frame. If the manifest has not been returned on time, telephone the treatment, storage, or disposal facility to determine the location of the manifest.
3. Manually record the return date on the outside of the manifest file folder.
4. Allow the Manager to randomly check the files to verify compliance.
5. File the folder after the signed manifest is returned.

Of the nine manifest files reviewed, the contractor's files were so poorly documented that it was impossible to determine whether the 35- or 45-day calculations had been made; whether or not the treatment, storage, or disposal facility had been contacted if the manifest was not received by

the 35th day; and whether an exception report was issued. The 35- and 45-day requirement is a means for tracking the manifest to ensure that the waste has safely arrived at the designated facility within a reasonable time period.

Because the files did not contain supporting documentation, we used the originally signed manifest to calculate whether the 35-day requirement had been met. Some manifest files did not have the return date written on the file folder; therefore, we accessed LeRC's automated system to determine whether a return date had been recorded. In cases where the file folder showed a return date, we compared the return dates listed on the file folder with those recorded in the automated system. We found that the return dates did not always match.

Based on our sample of the nine manifest files, we concluded the following:

- ◆ The 35- and 45-day requirement had been met in six cases.
- ◆ In two cases, the recorded return date was incorrect, and we could not determine compliance with the regulatory requirements. In both situations, the return date (recorded in pencil on the outside of the file folder) was the same date the designated facility signed the manifest. The Manager agreed that the two dates could not be the same due to the time required to mail the manifest back to LeRC.
- ◆ In one instance, the documentation showed that the support service contractor had received the manifest on the 46th day. Although it appeared that the regulation was not complied with, we determined that the manifest and invoice were mistakenly sent by the designated facility to LeRC's accounting office instead of directly to the EMO. The Manager explained that an exception report was not needed because the manifest was actually returned to LeRC within the regulatory time frame. However, the file did not contain any written documentation showing that LeRC had contacted the hazardous waste facility after 35 days had passed to locate the manifest. Prior to our review, but after the time period of the sample population (1995), the contractor implemented controls that we believe should prevent this situation from reoccurring.

Inadequate file documentation occurred because the contractor does not have a documented system of controls in place to consistently track and record compliance with regulations. In addition, the EMO Chief did not adequately monitor the contractor's work to ensure that the regulations were being complied with and that the contractor had an effective process in place to ensure and record compliance. Accordingly a formal process is needed to assure LeRC that the hazardous waste arrived safely at the designated facility and that the regulatory requirement is achieved.

***IMPROPER
SIGNATURE***

LeRC policy requires that an EMO civil servant sign all hazardous waste manifests. In one instance, signature did not occur because LeRC did not have a system in place to ensure that all hazardous waste manifests are properly signed and certified. Signature by a knowledgeable civil servant is important because the manifest requires that the agency certify to the EPA that the form is accurate and complete and that a waste minimization program is in place. The signature also is evidence that LeRC is aware of the amount and types of hazardous waste being disposed of.

The CFR requires that the generator sign the manifest. Block 16 of the EPA hazardous waste manifest form requires the generator to certify that:

The contents are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport according to government regulations.... A program is in place to reduce the volume of waste generated and minimize the present and future threat to human health and the environment.

To implement the above requirements, the LeRC Environmental Programs Manual requires that an EMO civil servant sign all manifests. Further, the EMO Chief delegated this responsibility to only two Compliance Team members.

In one case, a manifest had been signed by a logistics office civil servant and not by an authorized environmental staff member. In this one instance, the Manager stated that he departed from LeRC's policy because (1) the contract was near termination and (2) the logistics office civil servant could better monitor the activities because the logistics office had contracted for the equipment and disposal service. The individual from logistics who had signed the manifest was unaware of the potential ramifications associated with signing a hazardous waste manifest form. This person said that he signed the form because the company picking up the waste stated his signature only acknowledged the pickup. He was aware that the EMO had an environmental manual, but was unfamiliar with its requirements related to the disposal of hazardous waste.

This single instance points out a weakness in LeRC's internal control system relative to manifest processing. The hazardous waste manifests are not controlled or tracked. Therefore, LeRC has no way of ensuring that all manifests are accounted for, properly reviewed, and properly signed.

***TRAINING NOT
COMPLETED***

Environmental civil servant and contractor staff have not received all required training because a process is not in place to track staff training needs and accomplishments. Having staff participate in required training could help address the weaknesses identified with the LeRC manifests.

Federal regulations define training as a systematic program including recordkeeping for each employee. EPA regulations require that staff involved with hazardous waste matters receive training annually on the regulations and that staff be tested. Additionally, DOT regulations require recurrent hazardous waste training once every 3 years.

We reviewed the training records for the civil servant and contractor staff affiliated with hazardous waste management and found that the required annual and recurrent training had not been completed. The EMO Chief agreed that training requirements were not met. He stated that he periodically reviews civil servant and support service contractor staff training records; however, numerous types of environmental training are required, and it is cumbersome to ensure that all the training requirements are met for the entire office. We

noted that the EMO Chief does not have a system for identifying training needs and tracking training accomplishments. Because training was not being completed or recorded, we did not attempt to determine whether staff had been tested as required by the EPA.

CONCLUSION

LeRC needs to establish stronger controls over the processing of hazardous waste manifests. Stronger controls include (1) clarifying the roles and responsibilities of civil servant and support service contractor staff regarding manifest completeness, accuracy, review, and certification; (2) improving the oversight of the support service contractor; (3) implementing a process to track the manifest from its preparation to its return by the designated facility; and (4) ensuring that required training opportunities are identified and completed. Improved controls should help promote regulatory compliance and minimize future risks and costs to the agency caused by poorly prepared manifests. We did not expand our sample size to determine whether the problems identified are systemic; therefore, LeRC should consider that systemic problems may exist when implementing corrective action to the following recommendations.

RECOMMENDATION 1

We recommend that the Director, Office of Safety, Environmental, and Mission Assurance establish and implement the necessary controls over the preparation and processing of hazardous waste manifests to ensure accountability throughout the process. At a minimum,

- a) All manifests should include a 24-hour accessible emergency number.
- b) The location of the emergency number on the manifest form should be standardized and clearly identifiable.
- c) The manifest should be date stamped by an independent party when received by the EMO.
- d) All discussions and decisions related to manifest compliance should be *recorded* in the manifest file. Recording would specifically include an explanation of how compliance with the 35- and 45-day requirement was determined and whether the designated facility was contacted regarding return of the manifest.
- e) The completed manifest form should be thoroughly *reviewed* by an appropriately designated certifying official.

- f) All manifests should be *tracked* so that the 35- and 45-day requirements are met and all manifests issued from LeRC are accounted for and properly signed.

***MANAGEMENT'S
RESPONSE***

Concur.

- a) All manifests will include an emergency response service's telephone number (for either Infotrac or ChemTrec). Inclusion of the telephone number will ensure that knowledgeable personnel are available at all times to answer questions regarding hazardous chemicals and emergency response.
- b) The emergency response telephone number will be located in the bottom center of the manifest form.
- c) All manifests will be date stamped by the EMO secretary when they are returned to the office.
- d) Any contacts regarding a manifest will be recorded in a memorandum to the file and will be kept in the manifest file.
- e) Three EMO civil servants have been officially designated as certifying officials for signing the manifest. These employees have been trained in reviewing the manifest form.
- f) Each manifest is entered on a spreadsheet, maintained by the support service contractor, that includes the due dates for responses from the disposal facility and indicates whether a response was received. The spreadsheet is checked weekly to determine whether any manifests are nearing the 35- or 45-day deadline for the disposal facilities response. The support service contractor supervisor/team lead will ensure that all manifests are accounted for and properly signed.

***OIG EVALUATION OF
MANAGEMENT'S
RESPONSE***

LeRC's actions are responsive to the recommendation. Because the hazardous waste manifest form is the key document used to track waste throughout the disposal process, it is important to ensure that all manifest forms are complete and correct, that regulatory requirements are met, and that the manifest is tracked throughout the process. Particular attention should be given to documenting compliance with the 35- and 45-day requirements and to ensuring that all manifests are accounted for.

RECOMMENDATION 2 We recommend that the Director, Office of Safety, Environmental, and Mission Assurance clearly and formally define the roles, responsibilities, accountabilities, and relationship of the civil servant and support service contractor staff involved in the hazardous waste management program.

From an awareness perspective, LeRC needs to ensure that all Center staff, including contractors, clearly understand that it is their responsibility to coordinate with the EMO before involving themselves with hazardous waste matters.

**MANAGEMENT'S
RESPONSE**

Concur. The Lewis Environmental Manual Chapter dealing with hazardous waste disposal has been rewritten to clearly and formally define the roles and responsibilities of all groups involved with hazardous waste management.

To improve awareness of hazardous waste handling requirements, a memorandum will be distributed to all LeRC employees and resident contractor personnel to inform them of the need to coordinate with the EMO before involving themselves with hazardous waste matters.

**OIG EVALUATION OF
MANAGEMENT'S
RESPONSE**

LeRC's actions are responsive to the recommendation. Both civil servant and the support service contractor personnel have an integral and coordinated role in the disposal process; therefore, the roles and responsibilities have to be clearly defined and communicated.

Awareness is key to ensuring that all personnel at LeRC are basically knowledgeable and compliant with hazardous waste regulations, and periodic notices to staff help ensure compliance.

RECOMMENDATION 3 We recommend that the Director, Office of Safety, Environmental, and Mission Assurance implement controls to ensure that the support service contractor is compliant with regulations and the contract, including being responsible and accountable for the waste management program. Additionally, the support service contractor's expectations and performance need to be clearly identified and measured.

**MANAGEMENT'S
RESPONSE**

Concur. To ensure that the support service contractor complies with all regulatory requirements, the EMO has

instituted a formal audit program to review the operations of

the waste management function. A civil servant conducts the audits quarterly, and the results are given to the contractor and the EMO Chief, who monitors the response and corrective action.

The EMO is taking actions to ensure that the contractor complies with contract requirements through use of the performance-based contract, which includes explicit business management criteria for the award fee determination, tracking of action items on the contractor's performance, and monthly meetings to review contractor performance.

***OIG EVALUATION OF
MANAGEMENT'S
RESPONSE***

LeRC's actions are responsive to the recommendation. Because LeRC relies on the support service contractor to develop and implement an effective and compliant hazardous waste management program, it is important that LeRC actively monitor and oversee the contractor's efforts to ensure regulatory compliance and an effective and efficient hazardous waste management program. To meet the contract requirements, the contractor should be continually enhancing and improving the hazardous waste management program.

RECOMMENDATION 4

We recommend that the Director, Office of Safety, Environmental, and Mission Assurance ensure that all civil servant and contractor employees who handle or come in contact with hazardous products, chemicals, and materials are trained in the hazardous waste disposal and manifest requirements as provided in the EPA and DOT regulations.

***MANAGEMENT'S
RESPONSE***

Concur. All employees within the EMO who require training in the EPA and DOT regulations attended an on-site training program in December 1997. The training will be recorded in the EMO's document management system and tracked to ensure that required training is completed. The tracking will be reviewed and updated monthly.

The wider group of employees in other organizations, who generate hazardous waste and require training, have been identified, and training materials have been prepared for presentation. The EMO is scheduling this training for each of the organizations involved.

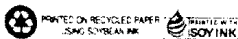
***OIG EVALUATION OF
MANAGEMENT'S
RESPONSE***

LeRC's actions are responsive to the recommendation. However, in addition to ensuring that the appropriate training classes are being completed, Center management also needs to ensure that the appropriate testing is being performed as required by the regulations. We have concerns that the manner of testing may not be sufficient and thorough based on our attendance at the December training class. For example, participants were not individually tested on their knowledge of the requirements; each participant completed only a portion of the test questions; and the correct answers for the test questions were not thoroughly reviewed and discussed. Center management should take these observations into account in monitoring the next scheduled training class.

EXAMPLE OF AN EPA HAZARDOUS WASTE MANIFEST FORM

Please print or type (Form designed for use on elite (12-pin) typewriter.) Form Approved, OMB No. 2050-0039

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator's US EPA ID No | Manifest Document No. | 2. Page 1 of | | Information in the shaded areas is not required by Federal law. | |
|---|--|-----------------------------|-----------------------|---|--|---|---------------|
| 3. Generator's Name and Mailing Address | | | | A. State Manifest Document Number | | | |
| 4. Generator's Phone () | | | | B. State Generator's ID | | | |
| 5. Transporter 1 Company Name | | 6. US EPA ID Number | | C. State Transporter's ID | | | |
| 7. Transporter 2 Company Name | | 8. US EPA ID Number | | D. Transporter's Phone | | | |
| 9. Designated Facility Name and Site Address | | 10. US EPA ID Number | | E. State Transporter's ID | | | |
| | | | | F. Transporter's Phone | | | |
| | | | | G. State Facility's ID | | | |
| | | | | H. Facility's Phone | | | |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) | | 12. Containers No. Type | | 13. Total Quantity | | 14. Unit W/Vol | 15. Waste No. |
| a. | | | | | | | |
| b. | | | | | | | |
| c. | | | | | | | |
| d. | | | | | | | |
| J. Additional Descriptions for Materials Listed Above | | | | K. Handling Codes for Wastes Listed Above | | | |
| 15. Special Handling Instructions and Additional Information | | | | | | | |
| <p>16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.</p> <p>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.</p> | | | | | | | |
| Printed/Typed Name | | | | Signature | | Month Day Year | |
| <p>17. Transporter 1 Acknowledgement of Receipt of Materials</p> <p>Printed/Typed Name</p> <p>Signature</p> <p>Month Day Year</p> | | | | | | | |
| <p>18. Transporter 2 Acknowledgement of Receipt of Materials</p> <p>Printed/Typed Name</p> <p>Signature</p> <p>Month Day Year</p> | | | | | | | |
| 19. Discrepancy Indication Space | | | | | | | |
| <p>20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.</p> <p>Printed/Typed Name</p> <p>Signature</p> <p>Month Day Year</p> | | | | | | | |



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SAMPLE SELECTION

The sample population was determined by the support service contractor manager who identified the number of hazardous waste manifests issued during calendar year 1995 from the waste management automated system.² We used calendar year 1995 because the most complete data was available for that year. We judgmentally selected 9 hazardous waste manifests of the 149 issued. Of the 149 manifests, 85 were for the disposal of contaminated soil and 64 were for the disposal of spent solvents, contaminated oils, lab packs, batteries, and other EPA listed hazardous substances. Our sample of nine consisted of one contaminated soil manifest that went to a landfill for burial and eight various hazardous substance manifests that were disposed of in various ways.

The contractor is responsible for selecting the treatment, storage, or disposal facility where the waste will go and the transporter. The EMO Chief gave the contractor guidelines for facility selection, such as reviewing certain dollar thresholds, using companies without problems or bad publicity, and selecting preferred disposal methods (reuse and recycling of waste versus landfill burial). In 1995, the contractor used eight treatment, storage, or disposal facilities, and our sample included at least one shipment to each facility.

² The OIG did not test the waste management automated system to verify the accuracy of the population size.

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REQUIREMENTS TESTING

The OIG tested LeRC manifests to determine whether LeRC's hazardous waste manifest process was compliant with Federal, State, and local requirements.

To comply with the Resource Conservation and Recovery Act (RCRA), the Environmental Protection Agency (EPA) implemented hazardous waste standards in Title 40 of the Code of Federal Regulations (CFR) Part 262. In general, we reviewed the manifests for completeness. The specific EPA standards we tested for included whether:

- The generator (LeRC) has an identification number.
- The generator uses only transporters and designated facilities having an EPA identification number.
- The generator's handwritten signature is on the manifest.
- The generator identifies whether the manifest was returned by the 35th day from shipment. If not, the generator must contact the designated facility to inquire on the manifest.
- The generator identifies whether the manifest was returned by the 45th day. If not, the generator must submit a report to the regional EPA office.

The EPA standards incorporate, by reference, the hazardous material standards required by the Department of Transportation (DOT). The DOT requirements we tested for are included in 49 CFR Part 171.

We tested that:

- The manifest contained the original signature of the transporter(s) and designated facility.
- The transporter(s) and designated facility included an EPA identification number on the manifest.

Appendix 3

- The hazardous items were listed first on the manifest and were clearly identified as such when hazardous and non-hazardous materials were being shipped together.
- The emergency response information, including the emergency response number, was on the shipping paper (manifest).
- The emergency response telephone number was a 24-hour accessible number clearly identified on the shipping paper (manifest).
- The shipper (LeRC) certified that the hazardous material for transportation was properly classified, described, packaged, marked, and transported in accordance with DOT regulations.

Both the EPA and DOT standards require specific refresher and recurrent hazardous waste training. The EPA requires yearly training and testing, while the DOT requires training once every 3 years.

Ohio law parallels the Federal hazardous waste requirements. However, in some areas, Ohio law is more stringent than Federal law, so we tested that LeRC was also complying with State laws. Specifically, Ohio law requires the annual reporting of hazardous waste that is generated, transported, and disposed of. Also, the Ohio Public Utilities Commission requires the transporter to have a license.

In addition to the laws, NASA has its own policies and procedures that must be followed. In particular, LeRC's Environmental Manual requires that the manifest be signed by an LeRC civil servant and that all supporting documentation (which includes the manifest) be reviewed by the contractor.

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